

## CITY OF LANSING

## **Department of Economic Development and Planning**

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## **Residential Handrail and Guardrails**

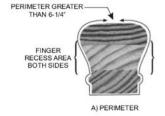
R311.7.8

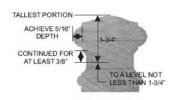
Handrails: Handrails having minimum and maximum height of 34 inches and 38 inches respectively, measured vertically from the nosing of the treads shall be provided on at least one side of the stairway. All required handrails shall be continuous the full length of the stairs with four (4) or more risers from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Ends shall be returned or shall be shall terminate into newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than 1-1/2 inches between the wall and the handrail.

**R311.7.8.3 Handrail Grip Size:** Required handrails shall be of one of the following types or provide equivalent grasp ability.

**Type I. Handrail** with a circular cross section shall have an outside diameter not less than 1½ inches and not greater than 2 inches. If the handrail is not circular, it shall have a perimeter dimension of at least 4 inches and not greater than 6½ inches with a cross section dimension of not more than 2½ inches. Edges shall have a minimum radius of not less than 0.01inch.

**Type II. Handrail** with a perimeter greater than 6½ inches shall have a graspable finger recess area on both sides of the profile. The finger recess shall begin within a distance of ¾ inch measured vertically from the tallest portion of the profile and achieve a depth of not less than 5/16 inch within 7/8 inch below the widest portion of the profile. This required depth shall continue for not less than 3/8 inch to a level that is not less than 1¾ inches below the tallest portion of the profile. The width of the handrail above the recess shall be 1¼ inches and not more than 2¾ inches. Edges shall have a minimum radius of 0.01 inch.





B) FINGER RECESS



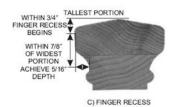


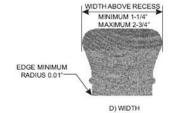
NONCIRCULAR CIRCULAR

[R311.7.7.3 Type I] Perimeter:  $4'' - 6\frac{1}{4}''$ 

## Guards

Areas where people may fall more than 30" (762) below the location where they are standing are required to have guards. This includes porches, balconies, ramps, or raised floor surfaces. The guards are to be at least 36" (914) in height. Porches or decks enclosed with screens are also to have guards if they meet the 30" (762) criteria for height above grade. The open sides of stairs with a rise of more than 30" (762) are to have guards located at least 34" (864) above the same plane used to determine handrail heights. Guards are to have a pattern of material which does not allow passage of a sphere 4" (102) or more in diameter. See the illustrations on pages 86 and 88 for exceptions related to the requirements for guards at stairs.



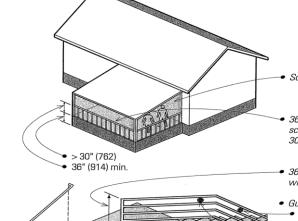


>30" [762] 36" [914] min.

Guard height 36" (914) minimum.

Guard pattern to prevent the passage of a sphere 4" (102) or more in diameter.

Guards are required where dropoffs are greater than 30" (762)



Screened porch or enclosed deck

36" (914) minimum height guard required at screened porch where porch floor surface is 30" (762) above adjacent surfaces

 36" (914) min. guard height required at stair with rise greater than 30" (762)

Guard pattern to prevent passage of a:
sphere 4" (102) or more in diameter

 4 <sup>3</sup>/8" (107) diameter sphere at stair guard only

 6" (152) diameter sphere at triangular opening formed by riser, tread and bottom rail of guard.

No guard required if fall height is less than 30" (762) [guard recommended at these conditions]